

Mineral Processing Skills Programmes

Introduction: The skills program is considered to be the most widely used method for production benefits on mineral pro-cessing. Mineral processing is a process in which valuable minerals are separated from worthless material or other valuable minerals by inducing them to gather in and on the surface of a froth layer. Sulphide and non-sulphide minerals as well as native metals are recovered. This process is based on the ability of certain chemicals to modify the surface properties of the mineral(s).

Target group: Plant operators	Certification: The skills programmes is composed of Generic Unit Standards and Specific Unit Standards ▪ 2 Generic Unit Standards	Duration: 27 Weeks
Entry Level Requirements: ▪ ABET Level 4/Grade 10 ▪ NQF 2	If competent a competence certificate will be issued by MQA	

Generic Unit Standards for Skills Programs

- **ORE RECEPTION SKILLS PROGRAM**
- **CRUSHING SKILLS PROGRAM**
- **SCRUBBING & SCREENING SKILLS PROGRAM**
- **DENSE MEDIUM SEPERATION SKILLS PROGRAM**

LEVEL	TYPE	CREDITS	U/S	GENERIC	Duration
2	CORE	4	MET-G001	Transfer material by means of a conveyer belt	10 Days
2	CORE	4	MET-G185	Handle waste material by means of a metallurgical plant	
Total		8			

ORE RECEPTION SKILLS PROGRAM

LEVEL	TYPE	CREDITS	U/S	Description	Duration
2	CORE	4	MET-G001	Transfer material by means of a conveyer belt	25 Days
2	CORE	4	MET-G185	Handle waste material by means of a metallurgical plant	
2	Elective	2	MET-G002	Control feed distribution by means of a mobile system.	
3	Elective	6	MET-G023	Maintain belt conveyor components.	
2	Elective	2	MET-G119	Remove Ferromagnetic material from a belt conveyor by means of a over-belt magnet	
2	Elective	4	MET-G172	Control a blending and reclaiming process in a beneficiation plant.	
2	Elective	2	MET-G216	Control feed rate by means of a feeder	
Total		24			

CRUSHING SKILLS PROGRAM

LEVEL	TYPE	CREDITS	U/S	Description	Duration
2	CORE	4	MET-G001	Transfer material by means of a conveyer belt	25 Days
2	CORE	4	MET-G185	Handle waste material by means of a metallurgical plant	
2	Elective	6	MET-G006	Crush Material by means of a Jaw Crusher	
3	Elective	6	MET-G007	Crush material by means of a Roller type	

				crusher
2	Elective	4	MET-G078	Crush material by means of a rotary breaker
4	Elective	24	MET-G161	oversee a crushing and screening operation in a metallurgical plant
Total		48		

SCRUBBING & SCREENING SKILLS PROGRAM

LEVEL	TYPE	CREDITS	U/S	Description	Duration
2	CORE	4	MET-G001	Transfer material by means of a conveyer belt	23 Days
2	CORE	4	MET-G185	Handle waste material by means of a metallurgical plant	
2	Elective	4	MET-G012	Separate material by means of a vibrating screen	
2	Elective	2	MET-G020	De-Water Material by means of a vibrating screen	
2	Elective	3	MET-G021	Maintain screen deck	
2	CORE	2	MET-G176	DE-Sliming material by means of a screen	
2	CORE	3	MET-G183	Remove Airborne pollutants by means of a scrubber.	
Total		22			

DENSE MEDIUM SEPERATION SKILLS PROGRAM

LEVEL	TYPE	CREDITS	U/S	Description	Duration	
2	CORE	4	MET-G001	Transfer material by means of a conveyer belt	45 Days	
2	CORE	4	MET-G185	Handle waste material by means of a metallurgical plant		
2	CORE	3	MET-G003	Transfer Fluid by means of a centrifugal plant		
2	Elective	4	MET-G011	Separate material by means of a cyclone		
2	Elective	3	MET-G018	Separate liquids and solids by means of a thickener		
2	Elective	2	MET-G022	Maintain Cyclone		
3	Elective	6	MET-G027	Separate material by means of a dense medium cyclone		
3	Elective	7	MET-G028	Separate material by means of a dense medium bath type separator		
2	Elective	3	MET-G163	Deposit waste rock onto a waste dump by means of a belt conveyor system		
2	CORE	3	MET-G187	Determine relative density by means of a density scale		
2	Elective	4	MET-G229	Make-Up a Magnetite suspension in a metallurgical plant		
2	CORE	2	MET-G216	Control Feed Rate by means of a feeder		
Total		45				